

NAVIGATION SERVICES



Important contributors to the U.S. marine transportation system

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION • UNITED STATES DEPARTMENT OF COMMERCE

NOAA provides mariners and other users with tools that enable safe and efficient navigation on U.S. waters. NOAA's suite of essential services supports maritime commerce; protection of life, property, and coastal and marine resources; and Homeland Security Maritime Domain Awareness.

NOAA's activities are currently authorized by the Hydrographic Services Improvement Act of 2002 and the Coast and Geodetic Survey Act of 1947.

- NOAA is the national authority for nautical charts, tides and water levels, shoreline and geodetic positioning.
- NOAA's primary area of responsibility for charting is the U.S.'s 3.4 million square nautical miles of Exclusive Economic Zone and 95,000 miles of national shoreline.
- NOAA's hydrographic and shoreline mapping programs deliver precise depths and positions of coastal features. The remote sensing technologies used reveal hazards to navigation such as rocks, wrecks and changes in man-made features.
- To aid 21st century navigation, NOAA is now building a suite of Electronic Navigational Charts (ENC) comparable to the paper nautical charts for U.S. waters.
- Tide and current measurements inform mariners about changing navigation conditions. NOAA's Physical Oceanographic Real Time Systems (PORTS) and coastal ocean forecasts provide mariners with highly concluded that the safety benefits of ENCs and accurate data on water levels, currents, wind electronic navigation speed, and weather.
- ??? systems for tankers would surpass that of double hulls.

As ever-larger ships transit the MTS, the margin of safety

between their keels, the seafloor and nearby structures has decreased significantly. NOAA's work on high accuracy positioning using GPS delivers centimeter-level accuracy to navigate these hazards and avoid overhead obstructions, such as bridges.

Should an emergency occur, such as a hurricane or vessel collision, NOAA responds rapidly with surveys to find navigation hazards and reopen ports to maritime traffic, and with scientific support for hazardous material spill response and remediation.

NOAA uses multibeam and side scan sonar to survey for navigation hazards. Ships use NOAA's real-time information to make better decisions on transit times and cargo load levels. ☺